Amendments to the Claims:
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for controlling a 1+1 bi-directional switching operation of an Asynchronous Transfer Mode (ATM) switch, comprising:

determining whether a signal fail (SF) has occurred at a source station;

determining whether a priority of the SF is higher than a priority of an existing SF if the SF is determined to have occurred;

determining whether a target station uses a same protocol as the source station if the priority of the SF is determined to be higher than the priority of the existing SF; ~~and~~

performing a switching operation if the same protocol is determined to be used by the target station, and transmitting a switching notification signal from the source station to the target ~~station~~station; and

performing associated switching operations by the target and source stations after checking signals from each other, if it is determined that the target station does not use the same protocol as the source station,

wherein priority is higher when a protection side of the source station is active, than when a working side of the source station is active.

2. (Original) The method of claim 1, wherein the switching operation is performed by the source station.

3. (Original) The method of claim 2, wherein the target station performs the switching operation upon receiving the switching notification signal from the source station.

4. (Canceled)

5. (Original) The method of claim 1, further comprising:

upon receiving the switching notification signal transmitted from the source station to the target station, transmitting a second switching notification signal from the target station to the source station, and switching from a working side of the target station to a protection side thereof, the protection side being in a standby mode.

6. (Previously Presented) The method of claim 1, wherein determining whether the target station uses the same protocol as the source station comprises:

defining a "K1" byte at the source station, the "K1" byte being unused, and transmitting the resulting "K1" byte from the source station to the target station; and

determining that the target station is of the same protocol if the target station responds to the transmitted "K1" byte.

7. (Canceled)

8. (Previously Presented) The method of claim 7, wherein performing associated switching operations comprises:

transmitting a switching request signal from the source station to the target station upon detection of the SF;

transmitting a reverse request signal to the source station from the target station in response to the switching request signal;

performing the associated switching operation by the source station upon receiving the reverse request signal and transmitting a source switching notification signal to the target station; and

upon receiving the switching notification signal at the target station, performing the associated switching operation in a manner identical to the source station, and transmitting a target switching notification signal to the source station.

9. (Original) The method of claim 1, wherein the SF is at least one of a Loss of Signal (LOS) condition, a Loss of Frame (LOF) condition, and an Alarm Indication Signal (AIS).

10. (Original) The method of claim 9, wherein the AIS occurs by at least one of a separation of a circuit board, a fault in a circuit board, and a fault in a line of a transmitting or receiving device.

11. (Original) The method of claim 1, wherein if a signal degrade (SD) status is detected at the source station having a higher priority then an existing SD status, the switching operation is performed if a data-grade signal is being transferred.

12. (Currently amended) A method for controlling a 1+1 bi-directional switching operation of an Asynchronous Transfer Mode (ATM) switch, comprising:

determining whether a new signal fail (SF) has occurred in a working side of a source station, the working side being in an active mode;

determining whether a priority of the new SF is higher than a priority of a current SF if the new SF is determined to have occurred;

determining whether a target station uses a same protocol as the source station if the priority of the new SF is determined to be higher than the priority of the current SF;

determining whether a protection side of the source station is in a normal state after the target station is determined to be of a same system type as the source station based on the protocol; ~~and~~

performing a switching operation if the protection side of the source station is determined to be in its normal state, and transmitting a source switching notification signal to the target ~~station~~station; and

performing associated switching operations by the target and source stations after checking signals from each other, if it is determined that the target station does not use the same protocol as the source station,

wherein a priority when the protection side is active is higher than a priority when the working side is active.

13. (Canceled)

14. (Original) The method of claim 12, further comprising:

receiving the source switching notification signal transmitted by the source station at the target station; and

transmitting a target switching notification signal from the target station to the source station and performing the switching operation from a working side of the target station to a protection side thereof, the protection side being in a standby mode.

15. (Original) The method of claim 12, wherein determining whether the target station uses the same protocol comprises:

defining a "K1" byte at the source station, the "K1" byte being unused, and transmitting the resulting "K1" byte to the target station; and

determining that the target station is of the same system type if the target station responds to the transmitted "K1" byte signal within a prescribed period of time.

16. (Canceled)

17. (Original) The method of claim 16, wherein performing associated switching operations comprises:

transmitting a switching request signal from the source station to the target station upon detection of the new SF;

transmitting a reverse request signal from the target station to the source station in response to the switching request signal;

upon receiving the reverse request signal at the source station, performing the associated switching operation and transmitting a source switching notification signal to the target station; and

upon receiving the source switching notification signal at the target station, performing the associated switching operation in a same manner as the source station, and transmitting a target switching notification signal to the source station.

18. (Previously Presented) The method of claim 12, wherein the new SF is at least one of a Loss of Signal (LOS) condition, a Loss of Frame (LOF) condition, and an Alarm Indication Signal (AIS).

19. (Original) The method of claim 18, wherein the AIS occurs by at least one of a separation of a circuit board, a fault in a circuit board, and a fault in a line of a transmitting or receiving device.

20. (Currently amended) A method for controlling a 1+1 bi-directional switching operation of an Asynchronous Transfer Mode (ATM) switch, comprising:

detecting whether a signal fail (SF) has occurred in a protection side of a source station when the protection side is active;

determining whether a protocol of a target station matches a protocol of the source station;

determining whether a priority of the SF is higher than a priority of an existing SF;

performing a switching operation from the protection side thereof to a working side of the source station after determining whether a signal fail has occurred and after determining that a protocol of the target station matches a protocol of the source station and that the priority of the SF is higher than the priority of the existing SF, and transmitting a switching notification signal to ~~a target~~the target station; ~~and~~

upon receiving the switching notification signal at the target station, transmitting a switching notification signal from the target station to the source station and performing a switching operation from a protection side of the target station to a working side ~~thereof~~thereof; and

performing associated switching operations by the target and source stations after checking signals from each other, if it is determined that the target station does not use the same protocol as the source station,

wherein a priority when the protection side is active is higher than a priority when the working side is active.

21. (Currently Amended) The method of claim 20, ~~further comprising:~~ wherein the

determining whether a protocol of the target station matches a protocol of the source station ~~by~~ comprises defining a "K1" byte at the source station, the "K1" byte being unused, and transmitting the resulting "K1" byte to the target station; and

determining that the target station is of the same system type if the target station responds to the transmitted "K1" byte signal within a prescribed period of time.

22. (Currently amended) An asynchronous transfer mode (ATM) switch, comprising:

a first station, having a first working side and a first protection side; and

a second station, having a second working side and a second protection side, the first and second working sides being coupled by a working channel and the first and second protection sides being coupled by a protection channel, wherein the first station is configured to determine whether a signal fail has occurred at the first station, determine whether the second station uses a same protocol as the first station, and perform a switching operation if the protocol is determined to be the same, wherein the first station determines whether a priority of the signal fail is higher than a priority of an existing signal fail when a signal fail is detected while the existing signal fail is ~~present~~present,

wherein the first station and the second station perform associated switching operations after checking signals from each other, if it is determined that the second station does not use the same protocol as the first station, and

wherein the priority is determined to be higher when the first protection side is active than when the first working side is active.

23. (Original) The system of claim 22, wherein the switching operation comprises switching from the first working side to the first protection side and transmitting a switching notification signal to the second station.

24. (Original) The system of claim 23, wherein the second station transmits a second switching notification signal to the first station upon receiving the switching notification signal from the first station, and wherein the second station performs a switching operation from the second working side to the second protection side.

25. (Original) The system of claim 22, wherein the first station switches from the first working side to the first protection side if the signal fail has occurred in the first working side.

26. – 27. (Canceled)

28. (Previously Presented) The system of claim 22, wherein the first station determines whether the second station uses the same protocol by defining an unused "K1" byte

and transmitting it to the second station, and determining that the second station is of the same system type if the second system responds to the transmitted "K1" byte within a prescribed period of time.

29. (Original) The system of claim 22, wherein the signal fail comprises at least one of a Loss of Signal (LOS) condition, a Loss of Frame (LOS) condition, and an Alarm Indication Signal (AIS).

30. (Original) The system of claim 29, wherein the AIS occurs by at least one of a separation of a circuit board, a fault in a circuit board, and a fault in a line of a transmitting or receiving device.

31. (Original) The system of claim 22, wherein the ATM switch is configured to provide a 1+1 bi-directional switching operation.